

COURSE INFORMATION					
Course Title	Code	Semester	COURSE INFORMATION Lecture+Practice+Labrotory Hour	Credits	ECTS
OPHTHALMOLOGY (Clinical Clerkship)	MED 502	Phase 5/9-10	28+52	5	5*

* ECTS credits are the university credits of the courses in Yeditepe University, Faculty of Medicine, Undergraduate Medical Education Program

Prerequisites	The student that joins this course should complete Phase 1, 2, 3 and 4 courses of medical faculty.
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Language of Instruction	English
Course Level	Second Cycle including First Cycle Degree (One Tier Programme)
Course Type	Compulsory
Course Coordinator	Sinan Tatlıpınar, MD Prof.
Instructors	Sinan Tatlıpınar, MD Prof. Raciha Beril Küçümen, MD Prof. İlke Bahçeci Şimşek, MD Assoc. Prof. Özge Yabaş Kızıloğlu MD Assoc. Prof. Vildan Öztürk, MD Assist. Prof. Alp Kayıran, MD Assist. Prof.
Assistants	
Goals	To convey necessary knowledge on pathology, symptomatology, clinics and pharmacology of eye diseases, to equip with skills and attitudes required for an appropriate approach to management of eye patients
Content	

Learning Outcomes	Programme Learning Outcomes	Teaching Methods	Assessment Methods
At the end of this clerkship, the student should be able to:			
1. Describe anatomy of eye and appendixes and orbit,	1.1.1-1.1.2	1,2,3	A, C
2. Classify refractive errors and different methods of treatment	1.1.3-1.1.6	1,2,3	A, C
3. Describe physiologies and pathologies of the cornea, conjunctiva, lacrimal system, eyelids and the orbit, explain mechanisms of occurrence, signs and symptoms, methods of examination and ancillary tests, and treatment options of these pathologies.	1.1.6-1.1.7 1.1.8-2.1.1 2.1.2-2.4.2 2.5.1-2.5.3 3.1.2-3.1.3	1,2,3,12	A, C
4. State signs and symptoms of different lenticular diseases including cataracts, indications and methods of surgical treatments.	1.1.6-1.1.7 1.1.8-2.1.1 2.1.2-2.4.2 2.5.1-2.5.3 3.1.2-3.1.3	1,2,3	A, C

5. Explain pathophysiology, diagnostic and treatment methods and pharmacology of various glaucoma types	1.1.6-1.1.7 1.1.8-2.1.1 2.1.2-2.2.2 2.2.3-2.4.2 2.5.1-2.5.3 3.1.2-3.1.3	1,2,3,12	A, C
6. Classify uveitic syndromes with respect to affected anatomical sites, signs and symptoms and describe different treatment options	1.1.6-1.1.7 1.1.8-2.1.1 2.1.2-2.4.2 2.5.1-2.5.3 3.1.2-3.1.3	1,2,3,12	A, C
7. Describe mechanisms of occurrence, signs and symptoms, methods of examination and ancillary tests, and treatment options of vascular and age related diseases of retina,	1.1.6-1.1.7 1.1.8-2.1.1 2.1.2-2.2.2 2.2.3-2.4.2 2.5.1-2.5.3 3.1.2-3.1.3	1,2,3	A, C
8. Explain pathophysiology, risk factors, signs and symptoms, preventive measures and different treatment methods of retinal detachment,	1.1.6-1.1.7 1.1.8-2.1.1 2.1.2-2.4.2 2.5.1-2.5.3 3.1.2-3.1.3	1,2,3	A, C
9. Describe signs, symptoms and examination methods of neuro-ophthalmological diseases; interpret relationship with neurological diseases and anatomical locations of lesions.	1.1.6-1.1.7 1.1.8-2.1.1 2.1.2-2.4.2 2.5.1-2.5.3 3.1.2-3.1.3	1,2,3	A, C
10. Explain signs, symptoms and examination methods of pediatric ophthalmological diseases and strabismus types and classify the treatment options.	1.1.6-1.1.7 1.1.8-2.1.1 2.1.2-2.2.2 2.2.3-2.4.2 2.5.1-2.5.3 3.1.2-3.1.3	1,2,3	A, C
11. Describe signs, symptoms, examination methods recognize differential diagnosis and classify the treatment options of red eye diseases.	1.1.6-1.1.7 1.1.8-2.1.1 2.1.2-2.4.2 2.5.1-2.5.3 3.1.2-3.1.3	1,2,3,12	A, C
12. Describe signs, symptoms, examination methods of eye trauma and emergency, recognize differential diagnosis and classify treatment options depending on the urgency.	1.1.6-1.1.7 1.1.8-2.1.1 2.1.2-2.4.2 2.5.1-2.5.3 3.1.2-3.1.3	1,2,3,12	A, C
13. Interpret ocular manifestations of systemic diseases.	1.1.6-1.1.7 1.1.8-2.1.1 2.1.2-2.4.2 2.5.1-2.5.3 3.1.2-3.1.3	1,2,3	A, C

14. Outlines methods of examination in ophthalmology.	1.1.6-1.1.7 1.1.8-2.1.1 2.1.2-2.4.2 2.5.1-2.5.3 3.1.2-3.1.3	1,2,3	A, C
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Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 9: Simulation, 12: Case Study
Assessment Methods:	A: Testing B: Presentation C: Homework

COURSE CONTENT		
WEEK	SUBJECT	Study Materials
1	Introductory Session	Materials for the course provided by instructor
1	Lecture Anatomy	Materials for the course provided by instructor
1	Lecture Refractive Errors	Materials for the course provided by instructor
1	Lecture Methods of Examination	Materials for the course provided by instructor
1	Lecture Conjunctiva	Materials for the course provided by instructor
1	Lecture Cornea	Materials for the course provided by instructor
1	Lecture Tear Film and Lacrimal Apparatus	Materials for the course provided by instructor
WEEK 2	SUBJECT	
1	Lecture Glaucoma	Materials for the course provided by instructor
1	Lecture Lids and Orbit	Materials for the course provided by instructor
1	Lecture Retinal Detachment and Intraocular Tumours	Materials for the course provided by instructor
1	Lecture Retinal Vascular Diseases	Materials for the course provided by instructor
1	Lecture CBL Red Eye	Materials for the course provided by instructor
1	Lecture CBL Trauma and Emergency in Ophthalmology	Materials for the course provided by instructor
1	Lecture Contact Lens and Refractive Surgery	Materials for the course provided by instructor
1	Lecture Diseases of the lens	Materials for the course provided by instructor

1	Lecture Ocular Manifestations of Systemic Diseases	Materials for the course provided by instructor
1	Lecture Uveal Tract	Materials for the course provided by instructor
WEEK 3	SUBJECT	
1	Lecture Macular Degeneration and Hereditary Retinal Dystrophies	Materials for the course provided by instructor
1	Lecture Strabismus	Materials for the course provided by instructor
1	Lecture Neuro – Ophthalmology	Materials for the course provided by instructor
1	Lecture Pediatric ophthalmology	Materials for the course provided by instructor
3	Assessment Session	Materials for the course provided by the instructor
3	Program Evaluation Session Review of the Exam Questions, Evaluation of the Program	Materials for the course provided by the instructor

NCC 2014 - Essential Medical Procedures (National Core Curriculum)	Performance Level
Eye, fundus examination	3

RECOMMENDED SOURCES	
Textbook	<ul style="list-style-type: none"> • Ophthalmology: A Short Textbook by J. Amann, Gerhard K. • Wills Eye Manual The Wills Eye Manual: Office and Emergency Room Diagnosis and Treatment of Eye Disease, by Nika Bagheri MD, Brynn Wajda MD, Charles Calvo MD, Alia Durrani MD • MEEI Manual of Ophthalmology by Peter K. Kaiser MD, Neil J. Friedman MD, Roberta Pineda MD • Basic Ophthalmology: Essentials for Medical Students, 10th ed. • Lang, Atlas Ophthalmology PDF
Additional Resources	<ul style="list-style-type: none"> • http://www.icoph.org/dynamic/attachments/resources/icoemergencyhandbook2010_1.pdf • https://timroot.com/opthobook/ • https://www.atlasophthalmology.net/ • https://eyewiki.org/Main_Page • https://www.columbiaeye.org/eye-library • http://webeye.ophth.uiowa.edu/eyeforum/ • https://eyeguru.org/ • http://www.meduniwien.ac.at/augen/englisch/steps.htm# • www.retinapodcast.com • www.eyes4ears.com • Lecture notes

ASSESSMENT	
Questions Types (Pencil-PaperTests)	Proportion (in Pencil-Paper Tests)
Multiple Choice Questions	80%
Extended Matching Questions	10%
Key Feature Questions	10%
Total	100 %
Other Assessment Methods and Tools	Proportion (in Pass/Fail Decision)
Structured Oral Exam (SOE)	35%
Objective Structured Clinical Exam (OSCE)	10%
Case Based Learning (CBL quiz)	5%
Total	50 %
Pass/Fail Decision	Proportion (in Pass/Fail Decision)
Pencil-Paper Tests	50%
Other Assessments Methods and Tools	50%

MATERIAL SHARING	
Documents	Via google classroom
Assignments	Student ppt presentations
Exams	Not shared

COURSE CATEGORY	Expertise/Field Courses
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COURSES CONTRIBUTION TO PROGRAM					
COMPETENCE AREA-1 / Professional Practices	Contribution				
COMPETENCE 1.1. Health Service Provider	1	2	3	4	5
Competency 1.1.1. Integrates knowledge, skills, and attitudes acquired from basic and clinical medical sciences, behavioral sciences, and social sciences to provide health services.	X				
Competency 1.1.2. Demonstrates a biopsychosocial approach that considers the individual's sociodemographic and sociocultural background without discrimination based on language, religion, race, or gender in patient management.	X				
Competency 1.1.3. Prioritizes the protection and improvement of individuals' and community's health in the delivery of healthcare services.	X				
Competency 1.1.4. Performs the necessary actions in the direction of maintaining and improving the state of health as considering the individual, social, social and environmental factors affecting health.					
Competency 1.1.5. Provides health education to healthy/ill individuals and their families, as well as to other healthcare professionals, by recognizing the characteristics, needs, and expectations of the target audience.					
Competency 1.1.6. Demonstrates a safe, rational, and effective approach in the processes of protection, diagnosis, treatment, follow-up, and rehabilitation in health service delivery.				X	
Competency 1.1.7. Performs interventional and/or non-interventional procedures safely and effectively for the patient in the processes of diagnosis, treatment, follow-up, and rehabilitation.				X	
Competency 1.1.8. Provides healthcare services considering patient and employee health and safety.				X	
Competency 1.1.9. Considers changes related to the physical and socio-economic environment at both regional and global scales that affect health, as well as changes in the individual characteristics and behaviors of those who seek healthcare services.					
COMPETENCE AREA-2 / Professional Values and Approaches	Contribution				
COMPETENCE 2.1. Adopting Professional Ethics and Principles	1	2	3	4	5
Competency 2.1.1. Considers good medical practices while performing the profession.				X	
Competency 2.1.2. Fulfills duties and obligations within the framework of ethical principles, rights, and legal responsibilities required by the profession.				X	
Competency 2.1.3. Demonstrates determined behavior in providing high-quality healthcare while considering the patient's integrity.					
Competency 2.1.4. Evaluates own performance in professional practices by considering own emotions and cognitive characteristics.					
COMPETENCE 2.2. Health Advocate					
Competency 2.2.1. Advocates for the improvement of healthcare service delivery by considering the concepts of social accountability and social responsibility in the protection and enhancement of community health.					
Competency 2.2.2. Plans and implements service delivery, education, and counseling processes related to individual and community health, in collaboration with all stakeholders, for the protection and improvement of health.		X			
Competency 2.2.3. Evaluates the impact of health policies and practices on individual and community health indicators and advocates for the improvement of healthcare quality.		X			
Competency 2.2.4. Gives importance to protecting and improving own physical, mental, and social health and takes necessary actions for it.					
COMPETENCE 2.3. Leader-Manager					

Competency 2.3.1. Demonstrates exemplary behavior and leadership within the healthcare team during service delivery.					
Competency 2.3.2. Utilizes resources in a cost-effective, socially beneficial, and compliant manner with regulations in the planning, implementation, and evaluation processes of healthcare services as the manager in the healthcare institution.					
COMPETENCE 2.4. Team Member					
Competency 2.4.1. Communicates effectively within the healthcare team and takes on different team roles as necessary.					
Competency 2.4.2. Displays appropriate behaviors while being aware of the duties and responsibilities of healthcare workers within the healthcare team.				X	
Competency 2.4.3. Works collaboratively and effectively with colleagues and other professional groups in professional practice.					
COMPETENCE 2.5. Communicator					
Competency 2.5.1. Communicates effectively with patients, their families, healthcare professionals, and other occupational groups, institutions and organizations.				X	
Competency 2.5.2. Communicates effectively with individuals and groups who require a special approach and have different sociocultural characteristics.					
Competency 2.5.3. Demonstrates a patient-centered approach that involves the patient in decision-making mechanisms during the diagnosis, treatment, follow-up, and rehabilitation processes.				X	
COMPETENCE AREA-3 / Professional and Personal Development	Contribution				
COMPETENCE 3.1. Scientific and Analytical Approach	1	2	3	4	5
Competency 3.1.1. Plans and implements scientific research, as necessary, for the population it serves, and utilizes the results obtained, as well as those from other research, for the benefit of the community.					
Competency 3.1.2. Accesses and critically evaluates current literature related to their profession.				X	
Competency 3.1.3. Applies evidence-based medicine principles in the clinical decision-making process.				X	
Competency 3.1.4. Uses information technologies to enhance the effectiveness of healthcare, research, and education activities.					
COMPETENCE 3.2. Lifelong Learner					
Competency 3.2.1. Manages effectively individual study processes and career development.					
Competency 3.2.2. Demonstrates skills in acquiring, evaluating, integrating new information with existing knowledge, applying to professional situations, and adapting to changing conditions throughout professional career.					
Competency 3.2.3. Selects the right learning resources to improve the quality of health care and organizes the learning process.					

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity or day	Duration (Hour)	Total Workload (Hour)
Course Duration (3 weeks)	15	5.5	82.5
Hours for off-the-classroom study (Pre-study, practice, review/week)	15	4	60
Homework	1	2	2
Exam	2	2	4
Total Work Load			148.5
Total Work Load / 30 (h)			4.95
ECTS Credit of the Course			5